

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1, 2-9 and 11-17 are pending in the application, with 1, 9 and 17 being the independent claims. Claims 2 and 10 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Claims 1, 9 and 17 are sought to be amended. Support for the amendment can be found throughout the specification, specifically in ¶¶ [0019]-[0021]. These changes introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-17 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,566,717 to Jung. Applicant respectfully traverses the rejection and requests that it be withdrawn.

Claim 1 has been amended to incorporate the features of dependant claim 2 and additional features described below. Differences exist between Jung and amended claim 1, which is reproduced below for the Examiner's convenience.

1. (currently amended) A system comprising:
a circuit comprising an n-type transistor, the n-type transistor adapted to comply with an operational requirement;
an electrostatic discharge (ESD) protection system adapted to comply with an ESD requirement; and
a pad,
wherein the ESD protection system is connected in series between the pad and the ~~circuit~~ n-type transistor, and substantially eliminates ESD

from flowing from the pad into the circuit n-type transistor, and the size of the n-type transistor and ESD protection system collectively is less than the size of an n-type transistor adapted to comply with the operational requirement and the ESD requirement.

The present invention is directed to reducing the size of a circuit which complies with both an operational requirement and an ESD requirement. Specifically, in ¶ [0021] of the specification describes one implementation of the present invention with reference to FIGs. 1 and 4 (reproduced below).

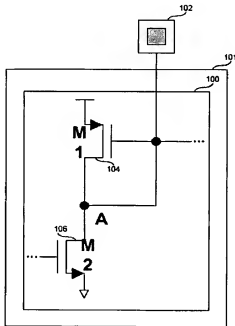


FIG. 1

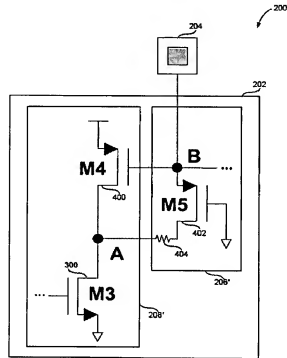


FIG. 4

For example, in the described implementation, with reference to FIG. 4, an operational requirement specifies that the dimensions of n-type transistor M3 300 are $200\text{ }\mu\text{m} \times 8\text{ }\mu\text{m}$, and an ESD requirement specifies that the dimensions of M5 402 are $2\text{ }\mu\text{m} \times 2\text{ }\mu\text{m}$. If the area of n-type transistor M3 300 and M5 402 were combined, the combined silicon area would be much less than the required silicon area of $400\text{ }\mu\text{m} \times 8\text{ }\mu\text{m}$.

μm for n-type transistor M2 (FIG. 1, above) to comply with both operational and ESD requirements.

In contrast, Jung is directed to "reducing the complexity of the manufacturing process, and prohibit the ESD characteristic deterioration." (Jung, col. 4, lines 3-5). Specifically, Jung teaches adding PMOS transistor 232 between the drain of NMOS transistor 231 and pad 210. (Jung, col. 3, lines 50-58; FIG. 2). Jung further explains that this makes it "possible to apply salicide process to the whole region of an integrated circuit including an ESD protection circuit... decreas[ing] processing time by eliminating silicide blocking." (Jung, col. 4, lines 62-67; "silicide blocking" referring to barrier layer 170 of FIG. 1). Furthermore, Jung does not teach or disclose any size advantage, on the contrary, Jung teaches adding the size of PMOS transistor 232 to the size of the unchanged internal circuit 220.

Because Jung fails to disclose the feature of "the size of the circuit and ESD protection system is less than the size of an n-type transistor adapted to comply with the operational requirement and the ESD requirement," Jung fails to disclose all the elements of claim 1. For at least these reasons, claim 1 is not anticipated by this reference.

In addition, the Examiner has rejected claims 3-8 as being anticipated by Jung. These dependent claims necessarily include all features of claim 1 as amended. Because the above-referenced feature is now in claim 1, this feature is likewise present in claims 3-8. Given that this feature is not disclosed in Jung, this reference fails to disclose all features of each of claims 3-8. These claims are therefore not anticipated by this reference.

The Examiner has also rejected claim 9 as being anticipated by Jung. Applicant has amended claim 9 to include the feature of dependant claim 10 and the above-mentioned feature. Because this feature is not disclosed by Jung, claim 9 is not anticipated by this reference.

The Examiner has further rejected claims 11-16 based on Jung. Claims 11-16, which depend from claim 9, now include this feature as well. Given that this feature is not disclosed by Jung, claims 11-16 are likewise not anticipated by the reference.

Finally, the Examiner has rejected claim 17 as being anticipated by Jung. Claim 17 has been amended in a manner similar to claims 1 and 9. Claim 17 now includes the above-mentioned feature. Because this feature is not disclosed in Jung, claim 17, as amended, is not anticipated by this reference.

Based on the discussion above, Applicant requests the rejections under 35 U.S.C. § 102 be reconsidered and withdrawn, and that claims 1, 2-9 and 11-17 be passed to allowance.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Amdt. dated Aug. 30, 2007 - 9 -
Reply to Office Action of May 30, 2007

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Appl. No. 10/668,249

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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